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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

WM02/0928

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ART UNIT	PAPER NUMBER

2673

DATE MAILED:

09/28/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/424,544

Applicant(s)

INO ET AL.

Examiner

Jeff Piziali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1,2 and 4-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3 and 10-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Election/Restrictions

2. Applicants' election with traverse of Group/Species 2 in Paper No. 6 is acknowledged. The traversal is on the grounds that the applicants wish to preserve their rights to provide linking claims and/or amend claim 3 to cover the invention of Group/Species 1; on the grounds that the examiner has not shown serious burden would be required for a search and examination of the full application and all twenty of its claims; and on the grounds that the inventions of Groups/Species 1 and 2 are related to a single inventive concept -- namely claim 3.

This is not found persuasive because the different classifications of the two inventions (as previously addressed in Paper No. 5) would place a serious burden of search upon the examiner, were the current application dealt with in its entirety. Furthermore, while claim 3 is generic, it (along with the rest of Group/Species 2) lacks the same or corresponding technical features (namely the driver circuit and output terminal arrangement) found in Group/Species 1. However, the examiner does acknowledge with appreciation that upon the allowance of a generic claim, the applicants will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141.

The requirement is still deemed proper and is therefore made FINAL.

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3. Claims 1, 2 and 4-9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention and a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 6.

Priority

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file. The acknowledgement of a Section 120 claim for domestic priority (found in Paper No. 5) was in error. The examiner apologizes for any undue confusion resulting from this error.

Claim Objections

5. Claim 17 is objected to because of the following informalities: the terminology "diving to" in line 6 is unclear, and may constitute a grammatical error. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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8. Claim 16 recites the limitation "their output circuit" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

10. Claims 3, 10-12 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Takeda et al. (US 4,825,203).

Regarding claim 3, Takeda et al. discloses a liquid crystal display [Fig. 2, 11] comprising a display portion in which a plurality of pixels [Fig. 2, 11-c] are two-dimensionally arranged at intersecting points of gate lines [Fig. 2, 11-a] as many as a plurality of rows and signal lines [Fig. 2, 11-b] as many as a plurality of columns which are wired in a matrix shape; and a plurality of driver circuits [Figs. 1(A) & 2, 13] for applying a signal potential to each pixel in the display portion through the signal lines of the plurality of columns (see Column 2, Line 56 - Column 3, Line 27), characterized in that the number of output terminals of each of the plurality of driver circuits is set to a measure of the total number of signal lines of the plurality of columns (see Column 4, Lines 22-46).

Regarding claim 10, Takeda et al. discloses time-divisional switches [Fig. 1(A), 32] for time-divisionally sending a signal potential [Fig. 1(A), V_R , V_G & V_B] which is outputted from each of the plurality of driver circuits to the signal lines of the plurality of columns (see Column 4, Lines 22-46).

Regarding claim 11, Takeda et al. discloses a leading waveform and a trailing waveform of a signal output waveform [Fig. 1(B), C_R , C_G & C_B] of each of the plurality of driver circuits are symmetrical with respect to a time base (see Column 4, Lines 47-68).

Regarding claim 12, Takeda et al. discloses a time-dividing number of the time-divisional switches is equal to three [see Fig. 1(A), 32].

Regarding claim 17, Takeda et al. discloses the plurality of driver circuits generate a signal potential so as to correct shift amounts of curves of voltage-transmittance characteristics of red, green and blue [see Fig. 1(A), V_R , V_G & V_B], by driving the time-divisional switches (see Column 4, Lines 22-46).

Regarding claim 18, Takeda et al. discloses a 1H (H denoting a horizontal scanning period) inversion driving or a 1H common inversion driving, the signal line which is selected first by the time-divisional switches is a line of blue, the signal line which is selected at the second time is a line of green, and the signal line which is selected at the third time is a line of red [see Fig. 4(B); Row $i+2$ & Columns j , $j+1$ and $j+2$].

Regarding claim 19, Takeda et al. discloses a dot inversion driving, the signal line which is selected first by the time-divisional switches is a line of red, the signal line which is selected at the second time is a line of green, and the signal line which is selected at the third time is a line of blue [see Fig. 5(B); Row i & Columns j, j+1 and j+2].

Regarding claim 20, Takeda et al. discloses time-division of the time-divisional switches distribute signals to red, green and blue constituting one pixel [see Figs. 4(A-B); Column 5, Lines 16-58].

11. Claims 13-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Uchino et al. (US 5,936,617).

Regarding claim 13, Uchino et al. discloses a liquid crystal display [Fig. 6, 11] comprising a display portion in which a plurality of pixels [Fig. 6, PXL] are two-dimensionally arranged at intersecting points of gate lines [Fig. 6, X] as many as a plurality of rows and signal lines [Fig. 6, Y] as many as a plurality of columns which are wired in a matrix shape; and a plurality of driver circuits [Fig. 6, 22] for applying a signal potential to each pixel in the display portion through the signal lines of the plurality of columns, characterized in that the number of output terminals of each of the plurality of driver circuits is set to a measure of the total number of signal lines of the plurality of columns (see Column 7, Lines 3-45); time-divisional switches [Fig. 6, HSW] for time-divisionally sending a signal potential [Fig. 6, Vsig out] which is outputted from each of the plurality of driver circuits to the signal lines of the plurality of

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columns; wherein a time-dividing number of the time-divisional switches is equal to three; and a period of time which is selected by the time-divisional switches is equal to or shorter than a third of a horizontal scanning period (see Fig. 7; Column 7, Line 46 - Column 8, Line 6).

Regarding claim 14, Uchino et al. discloses a leading time and a trailing time of each of the plurality of driver circuits are equal to or shorter than the period of time which is selected by the time-divisional switches (see Fig. 7; Column 7, Line 46 - Column 8, Line 6).

Regarding claim 15, Uchino et al. discloses a blanking period which is caused for the period of time selected by the time-divisional switches is equal to or shorter than [(a horizontal scanning period) - (the period of time selected by the time-divisional switches x 3)] / 3 (see Fig. 7; Column 7, Line 46 - Column 8, Line 6).

Regarding claim 16, Uchino et al. discloses the plurality of driver circuits have a function to stop the operation of their output circuit for the blanking period (see Fig. 7; Column 7, Line 46 - Column 8, Line 6).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hashimoto (US 5,619,225) is cited to further evidence the state of the art pertaining to liquid crystal displays.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Piziali whose telephone number is (703) 305-8382. The examiner can normally be reached on Monday - Friday (6:30AM - 3PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (703) 305-4938. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



J.P.
September 26, 2001


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